What is Claimed is:

1. A device for matching an antenna impedance in a portable radio telephone having a folder casing and a transmission/reception circuit, comprising:

a folder sensor for sensing a folded state and an unfolded state of the folder casing;

a controller for controlling a voltage according to the state sensed by the folder sensor; and,

a matching circuit having a variable capacitance diode for matching the antenna impedance and an impedance of the transmission/reception circuit according to the voltage of the controller.

2. A device as claimed in claim 1, wherein the folder casing includes an upper casing and a lower casing, and wherein the folder sensor includes:

a magnet fitted to a position of an upper casing of the portable radio telephone; and

a magnetic sensor fitted to a lower casing of the portable radio telephone.

3. A device as claimed in claim 1, wherein the matching circuit includes:

an inductor having a first end connected to the antenna and a second end connected to the transmission/reception circuit;

a first capacitor having a first end connected to the second end of the inductor and the transmission /reception circuit, and a second end grounded, and

a second capacitor and a variable capacitance diode connected in series between the antenna and ground,

wherein a capacitance of the variable capacitance diode is varied according to the voltage of the controller.

4. A device as claimed in claim 1, wherein the matching circuit includes:

an inductor having a first end connected to the antenna and a second end connected to the transmission/reception circuit;

a first capacitor having a first end connected to the second end of the inductor and the transmission /reception circuit, and a second end grounded;

a second capacitor having a first end connected to the antenna and the second end of the inductor, and having a second end connected to ground; and

a variable capacitance diode having a first end connected to the antenna and the second end of the inductor, and having a second end connected to ground,

wherein a capacitance of the variable capacitance diode is varied according to the voltage of the controller.

Sub a2

5. A device as claimed in claim 1, wherein the controller includes:

a memory for storing data for an optimal antenna impedance matching for the folded state and the opened state of the folder casing,

a central processing unit (CPU) for reading the data from the memory according to a signal from the folder sensor, and

a digital-to-analog converter (DAC) for converting the voltage from the CPU into an analog voltage and providing the analog voltage to the matching circuit.

6. A device as claimed in claim 5, wherein the DAC includes:

a variable pulse generator for receiving a control signal and a data signal from the CPU and in response thereto varying one selected from the group consisting of pulse widths and pulse densities; and

an integrating circuit for integrating pulses received from the variable pulse generator and providing an integrated output signal to the matching circuit.

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7. A device for matching an antenna impedance in a portable radio telephone having a transmission/reception circuit, and an antenna movable between an extracted position from the telephone and a retracted position into the telephone; comprising:

means for sensing an extracted state and a retracted state of the antenna and in response thereto providing a sensing signal;

a controller for providing a control voltage in response to the sensing signal; and,

means for matching an impedance of the antenna and an impedance of the transmission/reception circuit according to the control voltage from the controller.

8. A device as claimed in claim 7, wherein the controller includes;

a central processing unit (CPU) for receiving the sensing signal and providing a digital voltage corresponding to the sensing signal; and

a digital/analog convertor for receiving the digital voltage and converting the digital voltage into the control voltage and providing the control voltage to the means for matching

the impedances.

9. A device as claimed in claim 7, wherein the means for matching the impedance includes:

an inductor connected between the antenna and the transmission/reception circuit;

a first capacitor having a first end connected to the inductor and the transmission/reception circuit, and having a second end grounded;

a second capacitor and a variable capacitance diode connected in series between the antenna and ground,

wherein a capacitance of the variable capacitance diode is varied according to the control voltage.

10. A device as claimed in claim 7, wherein the means for matching the impedance includes;

an inductor having a first end connected to the antenna and a second end connected to the transmission/reception circuit;

a first capacitor having a first end connected to the second end of the inductor and the transmission /reception circuit, and a second end grounded;

a second capacitor having a first end connected to the antenna and the second end of the inductor, and having a second end connected to ground; and

a variable capacitance diode having a first end connected to the antenna and the second end of the inductor, and having a second end connected to ground,

wherein a capacitance of the variable capacitance diode is varied according to the control voltage.

11. A device for matching an antenna impedance in a portable radio telephone comprising a radio having a transmission/receiving circuit, a foldable casing enclosing the radio telephone, the foldable casing movable between an unfolded position and a folded position, and an antenna movable between an extracted position from the foldable casing and a retracted position into the foldable casing, the device comprising:

means for sensing whether the foldable casing is in the unfolded position and for sensing whether the antenna is in the extracted position, and for providing a sensing signal in response thereto; and,

means for matching an impedance of the antenna and an impedance of the transmission/receiving circuit in response to the sensing signal.

12. A device as claimed in claim 11, wherein the means for matching impedances includes:

a controller for receiving the sensing signal, and providing a digital voltage corresponding to the sensing signal;

a digital-to-analog convertor for converting the digital voltage into an analog voltage, and

a matching circuit for matching an impedance of the antenna and an impedance of the transmission/receiving circuit in response to the analog voltage.

13. A device as claimed in claim 12, wherein the controller includes a memory for storing a digital value representing a voltage value for matching the impedances.

14. A device as claimed in claim 12, wherein the controller stores voltage values for matching the impedances, corresponding to cases wherein: the antenna is extracted and the foldable casing is unfolded; the antenna is extracted and the foldable casing is folded; the antenna is retracted and the foldable casing is unfolded; and the antenna is retracted and the foldable casing is folded; and for selecting one of said voltage values in response to the sensing signal.

15. A device as claimed in claim 12, wherein the matching circuit includes:

an inductor connected between the antenna and the transmission/reception circuit;

a first capacitor having a first end connected to the inductor and the transmission/reception circuit, and having a second end grounded;

a second capacitor and a variable capacitance diode connected in series between the antenna and ground,

wherein a capacitance of the variable capacitance diode is varied according to the analog voltage.

16. A device as claimed in claim 12, wherein the matching circuit includes:

an inductor having a first end connected to the antenna and a second end connected to

the transmission/reception circuit;

a first capacitor having a first end connected to the second end of the inductor and the transmission /reception circuit, and a second end grounded;

a second capacitor having a first end connected to the antenna and the second end of the inductor, and having a second end connected to ground; and

a variable capacitance diode having a first end connected to the antenna and the second end of the inductor, and having a second end connected to ground,

wherein a capacitance of the variable capacitance diode is varied according to the analog voltage.

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17. A device for matching an antenna impedance in a portable radio telephone comprising a radio having transmission and receiving circuits, a foldable casing enclosing the radio, the foldable casing movable between an unfolded position and a folded position, and an antenna movable between an extracted position from the foldable casing and a retracted position into the foldable casing, the device comprising;

means for sensing whether the foldable casing is in the unfolded position, and for sensing whether the antenna is in the extracted position, and for providing a sensing signal in response thereto;

a measurement device for providing a RF signal to the antenna, and for measuring an RF signal from the antenna;

a controller for controlling the measurement device to provide the RF signal to the antenna in a reception mode, and to measure the RF signal from the antenna in a transmission

mode, and for determining optimal antenna impedance matching values for respective modes, and for the folder casing positions and the antenna positions, and for storing the optimal impedance matching values; and,

means for adjusting an impedance match between the antenna and the radio in response to the sensing signal under the control of the controller for each folder casing position, antenna impedance position, and transmission and reception mode to vary an antenna impedance matching, the controller measuring a transmission level in the transmission mode and a reception sensitivity in the reception mode every time the antenna impedance matching is varied, to determine optimal antenna impedance matching values for each folder casing position, antenna impedance position, and transmission and reception mode, and to store the optimal antenna impedance matching values therein.

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18. A device as claimed in claim 17, wherein the means for adjusting the impedance match includes;

a central processing unit (CPU) adjusting a voltage by a fixed increment from 0V to a fixed voltage level in response to the sensing signal under the control of the controller for each folder casing position, antenna impedance position, and transmission and reception mode to vary an antenna impedance matching, and for causing the controller to measure the transmission level in the transmission mode and the reception sensitivity in the reception mode every time the antenna impedance matching is varied, and for providing a control signal for storing the optimal antenna impedance matching values;

a memory for storing the optimal antenna impedance matching values under the

control of the CPU;

a digital-to-analog convertor for converting the voltage provided by the CPU into an analog voltage; and

a matching circuit for matching the impedance of the antenna and an impedance of the radio in response to the analog voltage.

19. A device as claimed in claim 18, wherein the matching circuit includes:

an inductor connected between the antenna and the transmission/reception circuit;

a first capacitor having a first end connected to the inductor and the transmission/reception circuit, and having a second end grounded;

a second capacitor and a variable capacitance diode connected in series between the antenna and ground,

wherein a capacitance of the variable capacitance diode is varied according to the analog voltage.

20. A device as claimed in claim 18, wherein the matching circuit includes:

an inductor having a first end connected to the antenna and a second end connected to the transmission/reception circuit;

a first capacitor having a first end connected to the second end of the inductor and the transmission /reception circuit, and a second end grounded;

a second capacitor having a first end connected to the antenna and the second end of the inductor, and having a second end connected to ground; and

a variable capacitance diode having a first end connected to the antenna and the second end of the inductor, and having a second end connected to ground,

wherein a capacitance of the variable capacitance diode is varied according to the analog voltage.

21. A portable radio terminal, comprising:

a radio having transmitting and receiving circuits;

a foldable casing enclosing said radio, said foldable casing movable between an open position and a folded position;

an antenna movable between a retracted position retracted into said foldable casing and an extended position extended from said foldable casing;

means for sensing whether said foldable casing is in the open position and for sensing whether said antenna is in the extended position, and for producing at least one sensing signal in response thereto; and

an impedance matching system for matching an impedance of said antenna and an impedance of said radio, said impedance matching system receiving the sensing signal and including an impedance matching circuit having a varactor, the varactor having a varactor voltage which is changed in response to the sensing signal for tuning the impedance matching circuit.

22. The portable radio terminal of claim 1, wherein said impedance matching system further comprises:

a processor receiving the sensing signal and outputting a digital control signal in response thereto; and

a digital to analog converter receiving the digital control signal and providing a varactor tuning voltage in response thereto.

23. The portable radio terminal of claim 2, wherein said processor comprises a memory storing a predetermined digital value representing a varactor voltage value for matching said impedances, wherein said processor reads said digital value and outputs the digital control signal in response thereto.

24. The portable radio terminal of claim 2, wherein said processor comprises a memory comprising a plurality of memory locations, each location storing a corresponding predetermined digital value representing a varactor voltage value for matching said impedances, wherein said processor reads one of said digital values in response to the sensing signal and outputs the digital control signal in response thereto.

25. The portable radio terminal of claim 4, wherein said memory comprises four memory locations, a first memory location storing a corresponding predetermined digital value representing a varactor voltage value for matching said impedances when said antenna is extended and said foldable casing is open, a second memory location storing a corresponding predetermined digital value representing a varactor voltage value for matching said impedances when said antenna is retracted and said foldable casing is open, a third

memory location storing a corresponding predetermined digital value representing a varactor voltage value for matching said impedances when said antenna is extended and said foldable casing is closed, and a fourth memory location storing a corresponding predetermined digital value representing a varactor voltage value for matching said impedances when said antenna is retracted and said foldable casing is closed.

Sub a7

26. The portable radio terminal of claim 1, wherein said impedance matching circuit further comprises:

an inductor having a first end and a second end being connected in series between said antenna and said radio;

a first capacitor connected between said varactor and the first end of said inductor; and

a second capacitor connected between the second end of said inductor and a reference voltage.

27. The portable radio terminal of claim 6, wherein said impedance matching system further comprises:

a processor receiving the sensing signal and outputting a digital control signal in response thereto; and

a digital to analog converter receiving the digital control signal and providing a varactor tuning voltage in response thereto.

28. The portable radio terminal of claim 7, wherein said processor comprises a memory storing a predetermined digital value representing a varactor voltage value for matching said impedances, wherein said processor reads said digital value and outputs the digital control signal in response thereto.

Sub a7

29. The portable radio terminal of claim 7, wherein said processor comprises a memory having a plurality of memory locations, each location storing a corresponding predetermined digital value representing a varactor voltage value for matching said impedances, wherein said processor reads one of said digital values in response to the sensing signal and outputs the digital control signal in response thereto.

30. The portable radio terminal of claim 1, wherein said impedance matching circuit further comprises:

an inductor having a first end and a second end being connected in series between said antenna and said radio;

a first capacitor connected between the first end of said inductor and a reference voltage; and

a second capacitor connected between the second end of said inductor and the reference voltage,

wherein the varactor is connected between the first end of said inductor and the reference voltage.

31. The portable radio terminal of claim 1, wherein said sensing means includes a folder switch.

32. A portable radio terminal, comprising:

a radio having transmitting and receiving circuits;

an antenna movable between a retracted position and an extended position;

a sensor for sensing whether said whether said antenna is in the extended position and for producing at least one sensing signal in response thereto; and

an impedance matching system for matching an impedance of said antenna and an impedance of said radio, said impedance matching system receiving the sensing signal and including an impedance matching circuit having a varactor, the varactor having a varactor voltage which is changed in response to the sensing signal for tuning the impedance matching circuit.

33. The portable radio terminal of claim 12, wherein said impedance matching system further comprises:

a processor receiving the sensing signal and outputting a digital control signal in response thereto; and

a digital to analog converter receiving the digital control signal and providing a varactor tuning voltage in response thereto.

34. The portable radio terminal of claim 13, wherein said processor comprises a

memory storing a predetermined digital value representing a varactor voltage value for matching said impedances, wherein said processor reads said digital value and outputs the digital control signal in response thereto.

35. The portable radio terminal of claim 13, wherein said impedance matching circuit further comprises:

an inductor having a first end and a second end being connected in series between said antenna and said radio;

a first capacitor connected between said varactor and the first end of said inductor; and

a second capacitor connected between the second end of said inductor and a reference voltage.

36. The portable radio terminal of claim 13, wherein said impedance matching circuit further comprises:

an inductor having a first end and a second end being connected in series between said antenna and said radio;

a first capacitor connected between the first end of said inductor and a reference voltage; and

a second capacitor connected between the second end of said inductor and the reference voltage,

wherein the varactor is connected between the first end of said inductor and the

reference voltage.

37. A method of producing a portable radio terminal comprising:

a radio having transmitting and receiving circuits, a foldable casing enclosing said radio, said foldable casing movable between an open position and a folded position;

an antenna movable between a retracted position into said foldable casing and an extended position extended from said foldable casing;

means for sensing whether said foldable casing is in the open position and for sensing whether the antenna is in the extended position, and for providing at least one sensing signal in response thereto; and

an impedance matching system for matching an impedance of said antenna and an impedance of said radio, said method comprising:

sensing whether said foldable casing is in the open position and whether the antenna is in the extended position;

determining an optimum varactor voltage value to match the impedances; and

storing a digital value representing said optimum varactor voltage value in a memory location in said impedance matching system.

38. The method of claim 17, wherein said determining and storing steps are performed when said antenna is extended and said foldable casing is open, when said antenna is retracted and said foldable casing is open, when said antenna is extended and said foldable casing is closed, and when said antenna is retracted and said foldable casing is closed.